

REMARKS

Entry of the foregoing and reexamination and reconsideration of the subject application, as amended, pursuant to and consistent with 37 C.F.R. § 112, are respectfully requested in light of the following remarks.

Claims 20-23 and 25-50 are pending in this application. Claims 1-19 and 24 were previously cancelled.

Claim 20 has been amended to recite "wherein the compound having at least one biuret bond and at least one aminoalkylsilane unit comprises at least one "true" biuret selected from the group consisting of:

- a. a "true" biuret comprising two isocyanate units and one alkoxy silane unit;
- b. a "true" biuret comprising one isocyanate unit and two alkoxy silane functional groups
- c. a "true" biuret comprising three alkoxy silane functional groups."

Support for this amendment is found in the specification at least on page 18, line 14 - page 21, line 15, specifically at page 18, lines 20-21; page 19, lines 7-8, page 20, lines 22-23 and page 21, lines 4-5. The structures of such "true" biurets are provided in structures 1-4 on pages 18-21. Claim 35 has been amended to recite that the amino portion of the aminoalkylsilane unit in the isocyanate composition is an amino group of the biuret. Support for this is found in the specification at least on page 15, lines 1-13. No new matter has been added in making these amendments.

Applicants gratefully acknowledge the withdrawal of the rejection of Claims 35-37, 49 and 50 under 35 U.S.C. §102(b) as being anticipated by Yamakado.

35 U.S.C. §112 second paragraph

Claims 35-37, 49 and 50 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regards as the invention. The Office Action indicates that the language "when the composition comprises a compound having at least one biuret bond and at least one aminoalkylsilane unit" makes the requirement appear optional due to the recitation of "when". The Office action indicates it is unclear if the moieties required by the recited steps are required or if they are optional as implied by "when." The Office Action further indicates there is no process step recited that makes the argued biuret group.

The amendment to claim 35, as above described above, removes "when" language and recites that the amino portion of the aminoalkylsilane unit in the isocyanate composition is an amino group of the biuret. With regard to the rejection that there is no process step recited that makes the argued biuret group, step requires the formation of a biuret. As such claim 35 particularly points out and distinctly claims the subject matter which applicants regards as the invention.

Applicants therefore request the withdrawal of the rejection these claims under 35 U.S.C. §112, second paragraph.

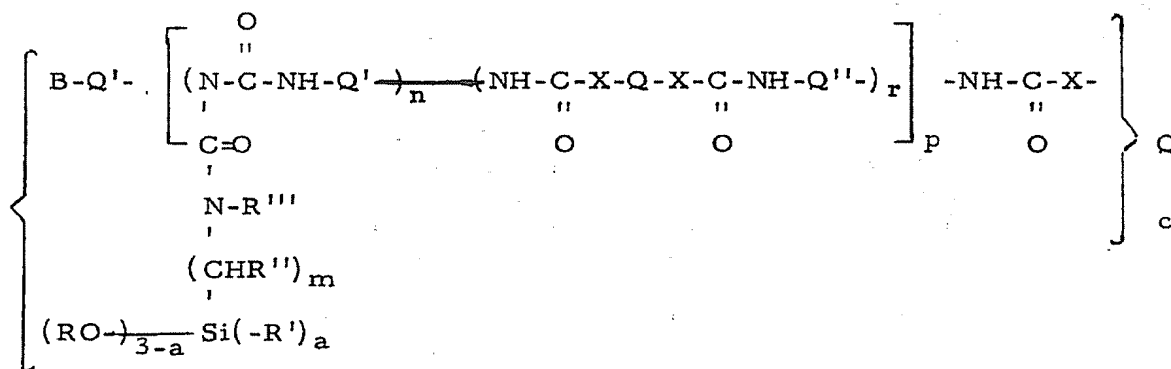
35 U.S.C. §103(a) rejection

Claims 20-23, 25-34 and 38-48 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Wagner et al. ("Wagner") (U.S. Patent No. 3903052).

Applicants respectfully submit that Claims 20-23, 25-34 and 38-48 are not obvious over Wagner.

To establish a *prima facie* case of obviousness, three basic criteria must be met. (MPEP 2143) First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

Wagner teaches the production of compounds of the general formula:



where B is an amino group or $\text{A} - \overset{\text{O}}{\parallel} \text{C} - \text{NH} -$:

where:

A represents an alkoxy, cycloalkoxy, aryloxy, NH_2 or aminoalkyl radical or an $\text{H}_2\text{N-Z-NH-}$ radical;

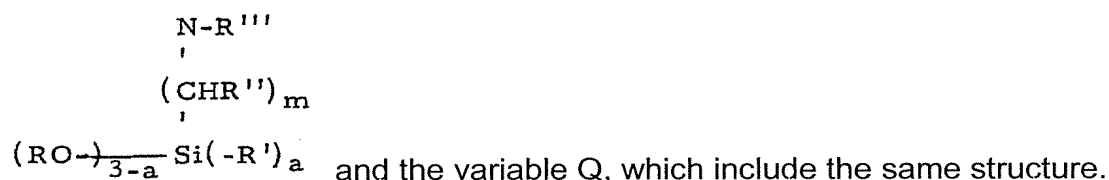
Z represents a divalent $\text{C}_2 - \text{C}_{26}$ alkyl, cycloalkyl, aralkyl or aryl radical; and

Q' represents a divalent alkyl radical containing 4 to 36 carbon atoms or a divalent C₄-C₁₄ cycloalkyl, C₆-C₄₆ arylalkyl, C₆-C₁₄ aryl or C₇-C₄₆ alkylaryl radical, and both Q'' and Q' may in addition contain ester, isocyanate, carbodiimide, biuret, allophanate or isocyanurate groups.

The Office Action indicates that Wagner discloses a composition containing the instantly claimed compositions and points to the selection of A as a diamine and the selection of subscripts n, p and c to provide the number of aminoalkylsilane units and diamino units required by the instant claims. The Office Action indicates that:

It is understood that such mixture of polymeric molecules contain molecules that vary in molecular weight as evidenced by average molecular weight, functionality as evidence by average functionalities of polymers, and monomer sequencing. The composition of the patentee will therefore necessarily have the instantly claimed at least two distinct compound." (page 4, lines 1-5)

Applicants direct the Examiner to amended Claim 20, which requires a "true" biuret having one of three possible structures. The definitions of B, Q, Q' and Q'' in Wagner does not encompass the required structures. In addition, the claims require that one of the compounds have at least two aminoalkylsilane units. An evaluation of the structure of the compounds of Wagner indicates that there are only two places in the molecule where a silicon atom is found:



This structure is not an aminoalkylsilane unit, as required by the claims, but rather is

an alkoxysilyl group. Therefore the compounds of Wagner do not comprise two required structural elements required by the instant claims.

With regard to the position in the Office Action that the composition of Wagner will necessarily have the instantly claimed at least two distinct compounds, applicants submit that while the composition of Wagner could have two or more distinct compounds, each of which are different from the compounds of the applicants invention for the reasons noted above.

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. There is no suggestion or motivation in Wagner to modify the compounds of Wagner to obtain the instant invention. There is no suggestion in Wagner to replace alkoxysubstituted silyl groups with aminoalkylsilane units, as required by the instant claims. Also there is no suggestion or motivation in Wagner to replace a biuret with a "true" biuret of the structures required by the claims. Therefore there is no motivation or suggestion in Wagner to modify the teachings of Wagner to obtain Applicant's invention.

To establish a *prima facie* case of obviousness, there must be a reasonable expectation of success. Wagner does not teach or suggest replacing alkoxysubstituted silyl groups with aminoalkylsilane units. An aminoalkylsilane unit, have an amine group at the end of the alkyl group, is expected to be potentially more reactive than an alkyl group. One of ordinary skill in the art at the time of the invention would not have a reasonable expectation of success in obtaining the

composition of the currently claimed invention because the teachings in Wagner do not provide any indication that such compounds could be produced using the procedures described therein, especially since the compounds of the instant invention comprise potentially reactive aminoalkyl groups in place of relatively alkyl groups, especially when reactions involving amines occur in the reaction process described in Wagner. Similarly there is no reasonable expectation of success in using the required "true" biurets with the claimed structures, as the potential stability or non-reactivity of this structure I the reaction scheme of Wagner is unknown. Therefore there is no reasonable expectation of success in developing the claimed composition.

To establish a *prima facie* case of obviousness, the prior art reference must teach or suggest all the claim limitations. Wagner does not teach or suggest compounds with aminoalkylsilane units, as required by the instant claims. Wagner also does not teach or suggest the use of a "true" biuret of the structures required by the claims. Therefore the prior art references do not teach or suggest all the claim limitations of the instant application.

In view of the above, the §103(a) rejection over Wagner should be reconsidered and withdrawn.

Allowable Claims

The Office Action indicates that claims 35-37, 49 and 50 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. §112, second paragraph.

Applicants have amended Claim 35, as described above, to overcome the rejections under 35 U.S.C. §112, second paragraph and therefore believe these claims are allowable.

In view of the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order. Such action is earnestly solicited.

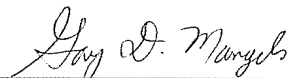
In the event that there are any questions related to this response, or the application in general, it would be appreciated if the Examiner would telephone the undersigned attorney at the below-listed telephone number concerning such questions so that prosecution of this application may be expedited.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

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